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Enablers and barriers of adapting post-disaster resettlements

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Abstract

Growing trend of disaster-induced displacements and resettlements is alarming the world to address the consequences to retain the stability of the concerned countries. In order to reduce the causes and consequences of displacements, governments and other concerned entities involve in the process of resettlement in different scales. However, settlers complain of the large-scale resettlement schemes for their inability to meet long-term expectations. Adaptability of the built environment is viewed as one of the principle reasons for this criticism. Accordingly, this paper aims to explore the long-term adaptability issues face by the communities who live in resettlements.

Resettlement is a process that introduces new built environment for the displaced community. This new built environment potentially redefines the social system as one interlinked with other subsystems of the community. However, following a fundamental change in the system, restoring the earlier equilibrium of a community requires certain basic conditions. Resettlement fails if the built environment does not provide these basic conditions. Failure in terms of built environment has been recorded in studies based on the inappropriate house design, insufficient infrastructure, inappropriate new environment, and alike.

Based on several case studies, it is assumed that the process of resettlement in developing countries follows almost the same pattern as the results of similar resettlement cases that are shown in various pieces of literature reflect same issues. Therefore, in order to understand the process of resettlement in detail, selecting a particular developing country will give more focus to draw conclusions. Accordingly, Sri Lanka is selected as the study focus. The data collection technique that is used for this study is semi-structured interviews. These interviews were conducted among settlers in 3 different resettlement schemes in Sri Lanka. The interview results are analysed using content analysis. The outcome of this study shows the enablers and barriers in adapting a post-disaster resettlement which is necessary to identify in order to provide durable solutions.

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1. Introduction

Disasters are serious disruptions, which put a community in a situation in which they need external resources for recovery. Some location specific disasters trigger immediate displacement and consequence resettlements depending on the political decisions made, including prohibition of reconstruction in any specific landscape. In such cases it involves the creation of an entire new built environment for the displaced population. A built environment is a man-made surrounding that encompasses patterns of human activity [1], and adaptability to a built environment is a long term social process. However, the large-scale resettlements are often criticised for offering only temporary relief without meeting the long-term expectations of the affected communities. Thus, the purpose of this paper is principally to understand the reasons for the enduring criticisms of large-scale resettlements.

2. Long-term adaptability of the built-environment

Four phases of post-disaster recovery are well-established and often repeated in disaster related literature. They are emergency response and relief, recovery and reconstruction, mitigation, and preparedness [2]. Though, all these phases are considered sequential and treated separately while giving the same weightage, the recovery and reconstruction phase is particularly critical. Because, this phase involves different tasks with weightage depending on the political decision made, including prohibition of reconstruction in any specific landscape. In such situations, the recovery and reconstruction phase becomes the key as it involves the creation of an entire new built environment for the displaced population [3]. Further, key performance attributes for measuring recovery progress and outcomes includes housing, infrastructure, economic viability, and social conditions, which makes this phase important [4]. Particularly, houses are considered as a highly valuable asset by people and thereby making houses a highly prioritise and most urgent need after a disaster [5]. Generally, governments of developed countries such as the United States do not reconstruct private houses [3]. But governments of developing countries assume the responsibility for large-scale housing reconstruction [6] for the reason that, the people who are affected by displacement often represent the poorer segments of the society. Consistent with this view, Cannon [7] considers all disasters as ‘socially constructed’ since vulnerability to disaster is an outcome of poverty. As a result, the resettlement in developing countries becomes a highly complex process, as the governments have to address the multi-hazard safety measures for the reason that the high level of hazard exposure is most commonly identified in developing countries [8].

Resettlement is not only a process of building houses, but also a process of introducing an entire new built-environment to the people attributing resilience measures for recovery. In this process, both human activities and the built-environment are expected to adjust each other. However, this adaptation cannot be expected in the short term without ensuring certain basic conditions, as it is an outcome of a long-term social process. Further, the built-environment also evolves and modifies itself constantly to satisfy the changing needs of its people [9]. While that is foreseeable, often the basic conditions connected to the population’s socio-cultural needs, which are the core for the long-term adaptability of the built environment, have often been overlooked. It is also true that, resettlements following a disaster encompass considerable and unavoidable differences compared to conventional methods in the layout, house design, building materials, and construction processes with those for conventional situations [6]. However, providing the basic positive conditions for people to adapt to the new built environment lies at the core of the sustainability of the resettlement. However, identifying the relevant positive conditions at the right time is often challenging for the government as well as donor organisations as the focus is mostly on the speed, quality, and cost effectiveness of construction, and hazard mitigation [6]. Further, the level of assistance given, and the type of settlement (rural/urban) also play a key role in providing basic positive conditions.

Resettlements are often criticised for their inability to create such adaptability for both the built environment and for the people. Ganapati [3] explains this as a resettlement failure under of two kinds: firstly, project related failures, such as poor planning, implementation, coordination, and participation; and secondly, outcome related failures, such as culturally inappropriate houses, inappropriate materials and technology, and failure to meet needs and

expectations of the community. Further, Ahmed [5] points to lack of institutional coordination lack of planning and clear policy, inequitable distribution, corruption, inordinate construction delays, and financial mismanagement and misappropriation as reasons for the shortcomings of resettlements. Yet, the success of the resettlement will depend on the perspective of the evaluator [4]. However, the most overlooked aspect of understanding and determining the success of the resettlement is the role of host community. Herein, the host community is defined as the community amid which or in whose neighbourhood the displaced people are resettled [10]. Commonly in resettlement studies, satisfaction of built environment and resettlement is largely perceived from the standpoint of the resettled community. However, various refugee studies observe that resettlement imposes a burden on the host community and consequently, reduces their satisfaction with the built environment [11]. This perspective is seldom spoken of in internal resettlement studies. Though, various studies emphasise multiple stakeholder participation for disaster recovery, such stakeholders are mainly business organisations, government, non-governmental organisations, volunteer groups, international agencies, and the disaster-stricken community [12]. This disproportion in consideration of the host community as a stakeholder is a theoretical gap in resettlement studies, as well as in the planning and implementation process. However, there are case studies, which highlight the struggles of host community in different perspectives.

The resettled community faces obstacles in adapting to a built environment. Besides, the host community's built environment gets modified as a result of the presence of the new community. Consequently, the host community too is confronted with adaptability issues. In order to identify the domains which would facilitate collective adaptability for both the communities, the need for social mixing through the built environment has to be recognised early in the resettlement process [13]. It can be reasonably assumed that the process of resettlement in developing countries follows very nearly the same pattern as the outcome of similar resettlement scenarios found in the literature pin to very much the same issues.

Reflecting the crowded nature of internal resettlements, a tendency has been observed by many researchers that the large-scale resettlements become towns in time [14]. Depending on the precondition of the host community, it affects their social dynamics and interaction with the built environment, either positively or negatively. Whitaker [15] explains this based on a study in western Tanzania as, an arrival of new town within rural settings bringing in foreign aid and infrastructure such as electricity and telecommunication to the host villagers. Contrarily, in economic terms, Chambers [16] explains that hosts benefited by the presence of resettled communities if they are better-off, whereas the host community, if poor, can become deprived owing to the need to share food, work, and wages with the new settlers. A case study of resettlement in post-earthquake Manjil, Iran endorses the above: the number of families with several members working rose family income declined in the host community following resettlement [14]. However, if the two communities are compatible, it is possible for both to coexist without adversely affecting the living standards of each other. However, to understand the influences to adjust or reject the resettlements by both communities, an empirical study is required.

It can be reasonably assumed that the process of resettlement in developing countries follows very nearly the same pattern as the outcome of similar resettlement scenarios found in the literature pin to very much the same issues. Therefore, to understand the resettlement process, studying in depth a specific developing country will yield more focussed information to draw valid conclusions. Accordingly, Sri Lanka was selected for study the resettlement process in the work reported here.

3. Research Method

Following case study research method, a series of interview were conducted in Sri Lanka within the period of June 2016 – August 2016. Disaster induced resettlements are rather common in Sri Lanka and it is widely observed all around the country. In order to cover all the categories of resettlements and to have a manageable number of cases and data, three districts were selected as the study area. They are; Jaffna, one of the highly conflict affected districts, Batticaloa, one of the highly tsunami affected districts, and Badulla, one of the highly landslide affected districts of the country. Also, these three districts fall under three different provinces correspondingly, Northern, Eastern, and Uva. Data from one resettlement scheme from each district is used for the work presented here. The

unit of analysis of the work presented here is the obstacles and challenges of adapting the new built-environment. Selected cases cover three different stages of resettlement. Case descriptions are provided below.

Table 1. Case descriptions

Cases	Description	Purpose for the selection
Case A	A village in Badulla district, which is declared as a landslide-prone zone and people were asked to evacuate the village	To identify the expectations of the people over the resettlement
Case B	Recent resettlement in Jaffna district. It is a resettlement after a prolonged displacement	To identify the initial adaptability issues of the new built-environment
Case C	Relatively old resettlement in Batticaloa district. People are living in the resettlement for more than 10 years	To identify the long-term adaptability issues of the built-environment

25 semi-structured interviews were conducted with a thematic focus, among both resettled and host communities, in order to identify the obstacles and challenges faced after the resettlement. Interviews were chosen as the appropriate data collection technique to elicit typical experiences of the people on resettlements. All the ethical procedures are followed as agreed with the University of Huddersfield ethics committee. Interview results were analysed using qualitative content analysis to detect a pattern in data and to categorise in themes.

4. Data analysis

The primary aim of any resettlement is to provide a safe accommodation to the vulnerable people who are exposed to or affected by disasters. Typically, resettlement is a process of introducing a new built-environment to the communities as a long-term solution. However, satisfaction of the communities is the key to sustain the resettlements for long-term. In conventional economic terms, satisfaction of the built-environment is measured based on the customers' willingness to pay. According to Day [17], in the case of resettlement, it can be measured based on ensuring no loss in community's welfare. In order to make sure this, the basic positive conditions to adapt the new environment have to be provided from the initial stages. These basic positive conditions are illustrated in the traditional migration theory of Lee [18] as a pulling factor for migration. Lee [18] further explains that each place has its own characteristics to hold and repel people. For example, good weather holds people and bad weather repels them. Also, there are some characteristics that attract a certain group of people but repel another. The three cases reported here, represent three different stage of resettlement to recognise the story in a wide angle.

Case A is a rural village in Badulla district with a majority of tea estate workers. A major landslide occurred in an adjoining village created tensions and alerted the officials. Consequently, the area was declared as a landslide prone zone after investigations. In order to safeguard lives in the vulnerable part of the village, a land is allocated for the resettlement and negotiations are ongoing for the housing construction for 42 families. The influences to adjust or reject the resettlements are illustrated in Figure 1.

Figure 1 shows that the favourable conditions in the new location and issues in the current location are the positive factors, which influence the willingness of the people to accept the new location. However, people were unsatisfied with the allocated land and showed reluctance in participating in the meetings conducted by the authorities regarding resettlement. The plausible reason for the reluctance is the people's unawareness of the urgency for resettlement as the likelihood of the disaster is unknown. Also, this is a direct resettlement without causing any displacement which typically allow time for the people to plan and organise their resettlement by relocating their livestock, household equipment, food stock, and construction materials, as necessary [19]. Therefore, people expect better houses than what they have currently to accommodate all their belongings. Further, as these people represent the poorer segment of the society, they cannot afford to spend extra money for the housing construction. Therefore, they expect a completely built house rather than receiving aids for the housing construction. In terms of infrastructure, the most essential and expected resources are water and electricity. The people also expect

closer proximity to schools and hospitals. New location is expected to be closer to their previous livelihood as they are traditional tea estate workers those who cannot really move into other works with their level of education. Also, they expect the location to be populated and safe in consistent with Davies [20]'s study which says that the displaced communities usually prefer to live with a host community as they feel physically, emotionally, and spiritually safer.

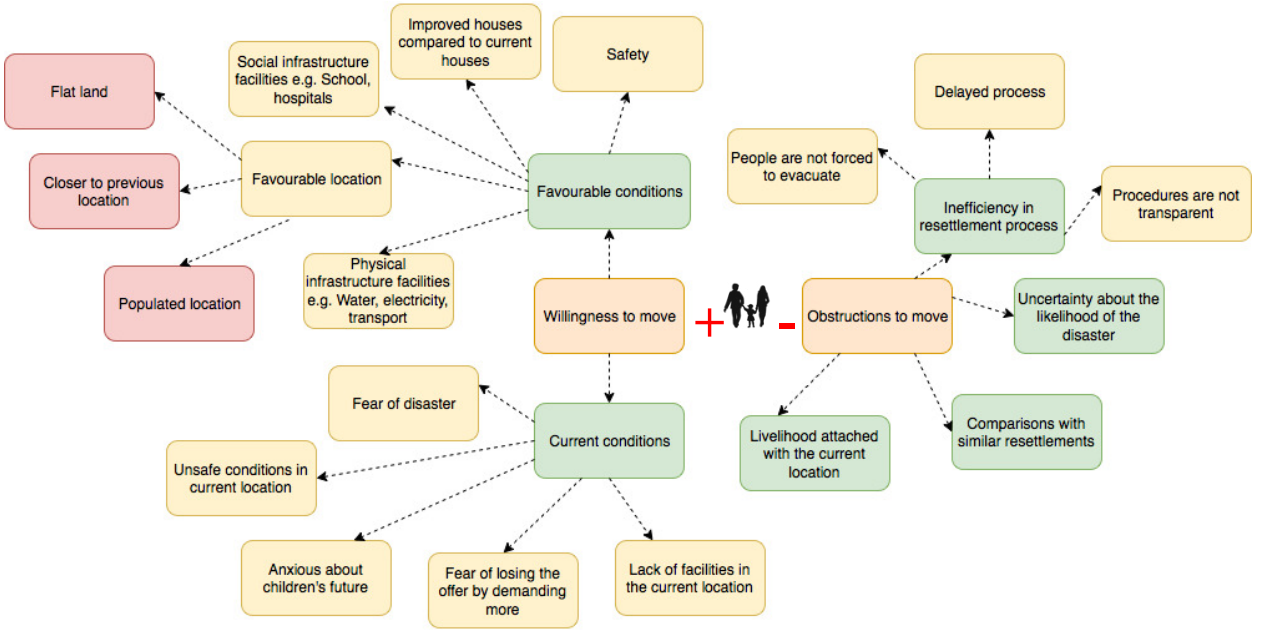

Fig. 1. Case A

Case B is a recent post-war resettlement, which is initiated after a prolonged displacement. These people were lived in a temporary shelter for 25 years without many facilities and the new houses were given for the purpose of improving their life standard. The people expressed satisfaction compared to their previous place. At the same time, they also go through challenges in adapting the environment. Figure 2 illustrates the factors affecting acceptance and rejection of the new environment.

In contrast to Case A, Case B is not a direct resettlement. It is a resettlement after a displacement. In this case, people chose the resettlement rather than their previous places, as they lived there temporarily. Agreeably, people expressed satisfaction about owning a house. However, some of the given houses are incomplete and the people are unable to complete the houses. Though some resettlement schemes offered flexibility to expand floor area as necessary, the beneficiaries face many difficulties including financial and legal issues in expanding and adapting the houses to satisfy their requirements. Obviously, the described adaptations and expansions are aligned with the resources of the households. Also, the houses are criticised for their poor quality. Further, it is worth to notice in this case that the people stated their inability and unwillingness to pay utility bills. The plausible reason is that they were provided all the utilities free of charge in their temporary shelter for a prolonged period and now it has become a burden for them to go back to a regularised life. Also, a reduction in community resources expressed as a reason for the inability to adapt the built-environment. As a consequence, the competition for resources could weaken social networks and reduce cooperation between the displaced and host communities.

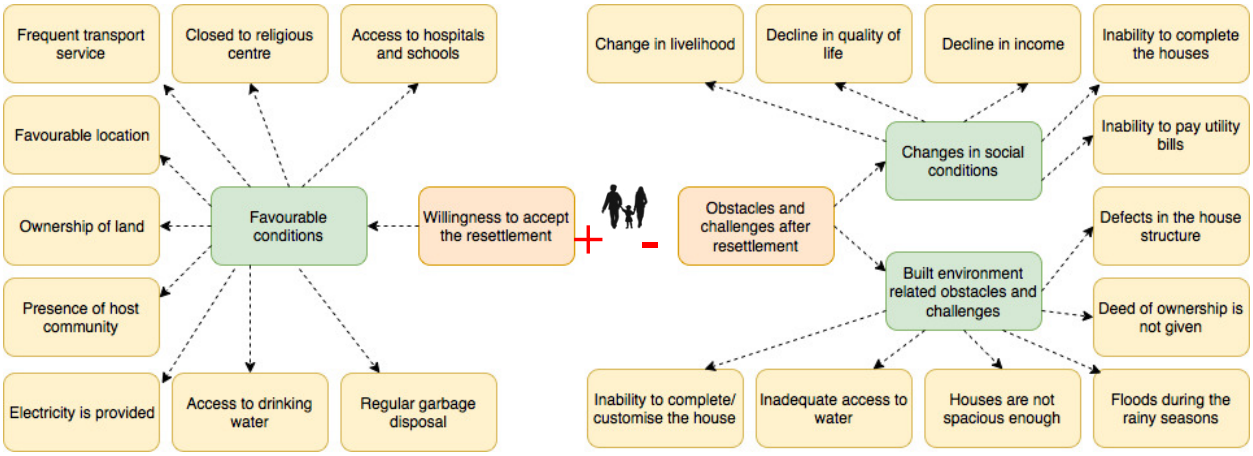

Fig. 2. Case B

Case C is a tsunami resettlement located in the Batticaloa district. This is comparatively an old settlement where people live more than 10 years. The resettled community is however from the same location, therefore there are no changes in their livelihood and host community. The resettlement is now more populated and people feel safe to live there. However, they also go through challenges in adapting the environment. Figure 3 illustrates the factors affecting acceptance and rejection of the new environment.

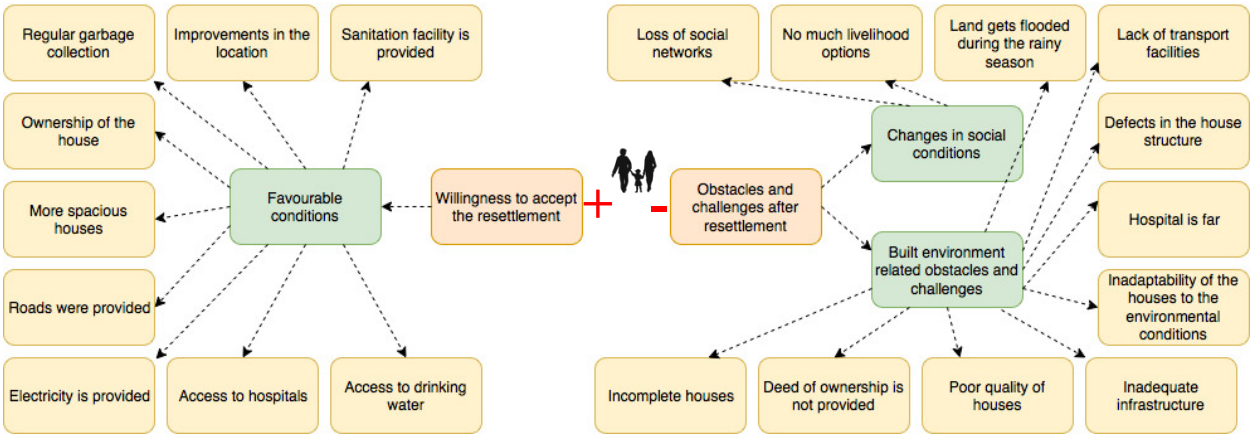

Fig. 3. Case C

Though there is a phase difference between Case B and Case C, some similarities can be noticed in the responses of the people. The communities face inadequacies in infrastructure, which shows that the availability of physical and social infrastructure was not increased according to the population increase. Further, the given houses are criticised for being hot in summer and cold in winter, and that the problem was aggravated by the absence of trees, unlike in traditional situations where the resettled community's lifestyle is homestead-based and outdoor-oriented. Also, it is worth to notice that the people were not given the deed of ownership yet. Such legal issues adversely affect the sense of belonging to the new location and hamper adaptation to the new built environment.

5. Discussion

Disasters strengthen pre-established practices of social discrimination by weakening the most vulnerable population [7]. Statistics endorse this, as 97.7% of the total disaster-induced homelessness is reported in developing countries [21]. Thus, housing reconstruction becomes a key component of any post-disaster recovery or resettlement

initiative in developing countries. Further, houses are considered as a highly valuable asset by the people thereby making houses a highly prioritised and most urgent need after a disaster [5]. Despite housing being identified as an urgent need, housing construction typically takes a long [21]. Hence, governments and donor agencies seek expedite construction by taking quick decisions. Jigyasu and Upadhyay [6] point out that such quick decisions are a factor in the struggle of the displaced population struggle to adjust the new built environment.

The term 'built environment' is not necessarily confined to enclosed buildings and includes all the manmade structures and defined open spaces that support human activities [22]. Accordingly, the essential man-made installations that support the functionality of the buildings and the community are also a key aspect of any built environment [23]. The inadequacy of the essential infrastructures reduces the functionality of the built environment and ultimately hinders the adaptability of the users. Generally, a large portion of resettlement funds is expended for housing construction [24]. Consequently, investment is less than desirable on physical infrastructure, which is thus poorly provided, although an essential part that fulfills the housing experience. Issues related to insufficient infrastructure are highlighted in the selected cases as a factor affecting the long-term adaptability of the displaced community. Correspondingly, results show that the available resources in the host environment also overwhelmed owing to its excessive use as it is not adequately supported [25]. Hence, besides being a problem of the displaced community, it also redraws the performance of host community's built environment as well.

Open and uncovered spaces such as compounds, sites, and landmarks are also part of the built environment [22]. Accordingly, the location of the resettlement plays a vital role in the adaptation to the built environment. It is true that the nature of resettlement allows no room for the resettled community to evolve with full participation. Because, location selection depends on several factors including land availability, the capability of the land to accommodate large-scale construction, and its susceptibility to future disaster. Therefore, the people are expected to somehow become accustomed to the new location [26]. However, suitability of the land for the livelihood and other activities of the resettled community is often overlooked or paid least attention to. Brun [27] adds that, the host community may become impoverished if their location and resources are shared without adequate support or compensation. While it is true that there is difficulty in satisfying all essential requirements in selecting the location for resettlement, there is need to take into consideration matters of livelihood and lifestyle of both host and displaced communities to a considerable extent in order to facilitate their adaptation to the new environment.

6. Conclusions

The number of internal displacements and consequent resettlements are visibly growing across the world. Meanwhile, studies report continuous criticisms of large-scale resettlements for failing to harmonise with the communities in the long-term. Though there are no parameters to measure the success of resettlements, this inadaptable built-environment is considered as a reason for resettlement failures. This provokes the need for understanding the factors affecting acceptance and rejection of the new environment. In order to address this need, this paper attempts to identify acceptance/ rejection factors in resettlement schemes, which are in different phases. Findings show that the precondition of the community, availability of infrastructure according to the population increase, issues/ pushing factors in the previous location are the factors affecting the adaptability at the initial phase of resettlement. After the resettlement legal issues in ownership, climate adaptability and cultural appropriateness of the houses, livelihood, availability and affordability of social and physical infrastructure are determining the adaptability to the new environment. Although legislations and policies identify the responsibilities of the parties and processes for bringing up a better coordination among communities, management by implementation agencies and institutional arrangements bring in practical difficulties in adhering to all requirements. For the reason that disaster recovery projects have exclusive characteristics such as emergent strategies, uncertainty, time urgency, community vulnerability and stakeholder issues [12]. However, adhering these factors in the resettlement process will improve the post-disaster recovery of the communities.

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